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Does Exercise Prevent the Common Cold?

Letter

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Dear Editor,

Lee et al.[1] carried out a meta-analysis of the potential role of exercise in preventing the common cold, and calculated that exercise might reduce the incidence of colds by 27% (relative risk [RR], 0.73; 95% confidence interval [CI], 0.56 to 0.95). However, their study has important limitations.

First, one of the four included trials was a study by Chubak et al.[2] although I pointed out that the total number of upper respiratory tract infections did not differ between the exercise and control groups in that study.[3] Thus, although the incidence of less severe upper respiratory infections ('the common cold') was lower in the exercise group, the incidence of more severe respiratory tract infections (such as 'flu') was higher. The difference in the distribution of the severity of respiratory infections between the control and exercise groups was highly significant with P = 0.0004.[3] Thus, exercise might, in fact, have caused harm by making respiratory infections more severe, without influencing their total incidence. Thus, by presenting the data for only the less severe respiratory infections ('common colds') of the Chubak et al.'s study, Lee et al. mislead the reader.

Second, Lee et al.[1] ignored our large cohort study which found that physical activity at work, and at leisure, had no association with the common cold risk when adjusted for potential confounders.[4] We analyzed the relationship between leisure time physical activity and common cold incidence in 3,470 males who were followed up for 2 years. In contrast, the meta-analysis by Lee et al.[1] included only 281 participants. Therefore, our study had much narrower CIs. For example, compared with the sedentary participants (n = 1,198), those who carried out moderate-level physical activity at leisure 3 times per week (n = 268) had a slightly higher incidence of colds with adjusted RR (1.05; 95% CI, 0.96 to 1.16).[4] Such a narrow CI around the null effect is inconsistent with any substantial reduction in common cold incidence by moderate level exercise.

Finally, even if Lee's estimate for the effect of exercise on common cold risk is valid (RR = 0.73), such an effect has no practical importance. Given that adults usually have 2 to 4 colds per year,[5] an average person should exercise for 1 to 2 years to prevent 1 episode of the common cold on the basis of the RR = 0.73 estimate. Lee et al.[1] indicated that regular exercise means having exercise sessions 5 times per week. Assuming that 1 exercise session takes 1 hour, 5 exercise sessions per week for 1 year sums up to 250 hours in total; corresponding to 10 full days. Thus, with an effect of RR = 0.73 a person should exercise a time period corresponding to over 1 week round the clock to prevent 1 episode of the common cold which usually does not last over 1 week and usually only slightly limits functional activities. Thus, more time would be used in the exercise sessions than would be saved from suffering from the cold symptoms.

Exercise has a number of beneficial effects and therefore sedentary people should be encouraged to start exercise. However, there is no good evidence that exercise reduces the risk of colds. Exercise should not be encouraged with the argument that it would reduce the risk of colds.

Yours Sincerely

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CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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